## IN THE CLAIMS

Claims 1-6 (canceled)

7.    (currently amended)    A storage controller for controlling transfer of input/output data to and from a lower level ~~external~~ apparatus in response to input/output requests received from a higher level ~~external~~ apparatus, said storage controller comprising:

a plurality of external interface controllers for receiving said input/output requests;

a plurality of control processors which process said input/output requests;

a loop of fibre channel interface interposed between said external interface controllers on one hand and said control processors on the other hand so as to serve as a channel through which information is transferred therebetween; and

storing means which is accessed in common by said control processors and which stores a logical unit number which the input/output requests are assigned to, and to be processed by said control processors;

wherein each of said control processors comprises:

monitoring means for monitoring operating status of the other control processors; and

takeover means which, if a stopped state of any other control processor is detected, updates said logical unit numbers in said storing means so that the control processor in question may take over the processing of the stopped control processor.

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8.　　(original)　　A storage controller according to claim 7, wherein said storing means stores physical addresses on said loop and logical unit numbers of the input/output requests to be processed with respect to each of said control processors, and wherein each of said control processor comprises takeover means which, if a stopped state of any other control processor is detected, updates said physical addresses and said logical unit numbers in said storing means so that the control processor in question may take over the processing of the stopped control processor.

9.　　(currently amended)　　A storage controller for controlling transfer of input/output data to and from a lower level external apparatus in response to input/output requests received from a higher level external apparatus, said storage controller comprising:

a plurality of external interface controllers for receiving said input/output requests;

a plurality of control processors which process said input/output requests;

a loop of fibre channel interface interposed between said external interface controllers on one hand and said control processors on the other hand so as to serve as a channel through which information is transferred therebetween; and

storing means which is accessed in common by said control processors and which stores logical unit numbers of the input/output requests to be processed by said control processors;

wherein each of said control processors comprises:

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counting means for counting the number of processed input/output requests;

notifying means for notifying the other control processors of the counted

number of processed input/output requests;

acquiring means for acquiring the number of processed input/output requests

from the other control processors; and

updating means for updating said logical unit numbers in said storing means

so as to average the counts of processed input/output requests between said control

processors.


Claim 10 (canceled)


Please add new claims 11-20 as follows:

--    11.    (new): A storage controller according to claim 7, wherein said storing

means includes a time information area for allowing said plurality of control

processors to write current time information therein,

wherein each of said plurality of control processors further comprises:

means for writing the current time information at predetermined intervals, and

wherein said monitoring means allows each control processor to check said

current time information written by other control processors to detect whether any of

said control processors has stopped or not.


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12.    (new): A storage controller according to claim 7, wherein external interfaces, which are used for communication between said external interface controllers and said higher level apparatus, has a plurality of different types, and wherein each of said external interface controller converts said input/output request in an information format of said external interface received from said higher level apparatus into an input/output request in another format used for said loop of fibre channel interface.

13.    (new): A storage controller according to claim 12, wherein said external interface includes a fibre channel interface, and

wherein said external interface controller transmits the input/output request received from said higher level apparatus to said loop of fibre channel interface.

14.    (new): A storage controller according to claim 12, wherein said external interface includes a SCSI, and

wherein said external interface controller converts said input/output request in a SCSI format into a request in an information format used for said loop of fibre channel interface.

15.    (new): A storage controller according to claim 12, wherein said external interface includes a channel interface for the use by a main frame system, and

wherein said external interface controller converts said input/output request in the channel interface format into a request in an information format used for said loop of fibre channel interface.

16.     (new): A storage controller according to claim 9, wherein said storing means stores physical addresses of said loop of fibre channel corresponding to each of said control processors in addition to said logical unit numbers corresponding to the same control processor.

17.     (new): A storage controller according to claim 9, wherein external interfaces, which are used for communication between said external interface controllers and said higher level apparatus, has a plurality of different types, and
     wherein each of said external interface controllers converts said input/output request in an information format of said external interface received from said higher level apparatus into the input/output request in another format used for said loop of fibre channel interface.

18.     (new): A storage controller according to claim 17, wherein said external interface includes a fibre channel interface, and
     wherein said external interface controller transmits an input/output request received from said higher level apparatus to said loop of fibre channel interface.

19.     (new): A storage controller according to claim 17, wherein said external interface includes a SCSI, and

wherein said external interface controller converts said input/output request in SCSI format into a request in an information format used for said loop of fibre channel interface.

20.     (new): A storage controller according to claim 17, wherein said external interface includes a channel interface controller which converts said input/output request in channel interface format into a request in an information format used for said loop of fibre channel interface. --